

UNIVERSITY OF TAMPERE
School of Management
FACTORS AFFECTING THE PREFERENCES OF SOCIAL HOUSING:
EVIDENCE FROM HO CHI MINH CITY

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ABSTRACT

The main purpose of the study is to investigate the effecting of key factors on social housing in Ho Chi Minh City, Vietnam. First, a model which is proposed based on analyzing of previous literature. Then the model is tested on a pilot test which is conducted in a small real estate professional group and another group of 15 respondents, and a larger survey of 200 samples.

The study finds out a strong positive relationship between three factors, including “Financial”, “Location’ and “Subjective Norm” to preferences of social housing. Two factors “Living space” and “Environment” have no positive association with Preferences of social housing. It is also found that there is no difference in intention of customers according to different demographics consisting of gender, age, marital status, monthly income and education level.

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CHAPTER 1 – INTRODUCTION

1.1. Background of the study

As a developing country with a population of 90 million people, Vietnamese faced with enormous challenges in order to meet the essential needlessly people such as housing, infrastructure, technical, healthcare, teaching and environmental education. With the urban population accounts for nearly 30 million people and urban population growth expected at about 850-950 thousand each year of the next decade, the problem of housing for people in the cities of our country is becoming more urgent, especially in big cities like Hanoi and Ho Chi Minh city.

Ho Chi Minh City is a special city, a major center of economic, cultural, education and training, science and technology, exchange hubs and international integration, the motive, motivation, there charisma and power of the pervasive southern key economic, has important political position of the country, with a population of nearly 8 million people today. The speed of economic development and population growth of the city has always reached high levels. Economic development - social, per capita income is improving day along with the increase in population has created a growing demand for housing of the people was no small challenge for the city. Assessment of the importance that, through the process of development, the Party Committee and the municipal authorities over the periods are interested in caring for and solve people's housing, especially housing for civil servants, armed forces, low-income people and the poor, whether this is an important political tasks in the process of economic development - the social city, contribute to solving social security, raise high confidence of the people in the Party, the State and humanity socialist regime.

After the Housing Law came into force, the city has worked out the program, indicators, housing development plan, together with specific solutions in each 5-year period (2006-2010, 2011-2015), especially given the many priorities in the development of social housing service for those officers, civil servants, employees, officers and professional soldiers of the armed forces and the low-income person over the city. In this stage, with all the city budget conditions are limited, the money gained from the sale or lease of state property as well as land use fees for the project development of commercial housing for the construction of social housing projects is not much.

There is no prior research about preference of social housing in Vietnam, therefore, the study aims to find better understand consumer preferences for social housing in the locality Ho Chi Minh City.

1.2. Research problem

Rated as attractive to low-income people, but social housing is becoming more vulnerable to commercial housing projects have started offering incentives is almost equal to the in society. In Ho Chi Minh city, many civil servants though income is not high, but still choose to buy commercial houses, instead of participating in the purchase of social housing with credit support of government. On the other hand, social housing has not really attracted also by the people always has the mentality of social housing considered synonymous with poor quality, quickly degrading, difficulties in the transfer problem, not selected units, floors, oriented. It is worth mentioning that the price of social housing nor commercial housing cheaper.

1.3. Objectives of the study

This study emphasizes motivation to encourage people to consider the purchase of social housing. Deep research reports and in-depth description of each motivation were discussed in the following section. The objective of this study was to determine how the relationship of a number of factors will affect the preference of social housing. These factors include financial factor, location factor, living space factors, environment factors and subjective norm.

1.4. Scope of the study

Ho Chi Minh City currently has more than 100,000 officers and employees (civil servants), which has more than 11,000 administrative officials (Le Hoai Trung, deputy director of the Department of Home Affairs, 2010). Their housing needs are clearly urgent. Therefore officials are subjected to the most preferred when access to low-cost housing program of the government. Premises of public authorities pay less than the private sector. Brain drain situation in the public sector is increasingly alarming. Low benefits result in reduced enthusiasm. Cumbersome public administration... Wages have enough to buy a home of civil servants? It's too hard if they only paid in accordance with state leaders to pay.

In early 2009, Vo Thi Thanh Tuyen bachelor and group colleagues at the Research Institute of Ho Chi Minh City conducted a survey of over 300 real young cadres of the city. The results showed that only 20.3% of civil servants have their own homes, the majority are still living with family (54%); especially with 17.3% of civil servants to spend money for the rents, the new rest at home by the agency concerned. The survey also showed that only 25.4% of civil servants income from 3 million VND/month or more, 74.6% have incomes of less than 3 million VND, with 12% earning less than 1 million VND, 70% of civil servants do not have that extra income... With this income, the demand for housing is almost the dream of the young officers.

The topic of this research is to identify the preferences in social housing. This study focuses on the lease-purchase social housing. Ho Chi Minh city, which is one of the regions in Vietnam, was chosen as target place of analysis. Target respondents responded for this survey, were those people who work in the public sector (officers, servants, employees).

1.5. Contribution of the study

The results of this research provided a better understanding of the knowledge and purchase intention attitudes of people that would encourage them to choose social housing. Besides, this study is useful in helping housing developers and government to understand better customer preferences towards the trend of future housing development as references, in order to satisfy the need of prospective house buyers.

CHAPTER 2 - LITERATURE REVIEW

2.1. Theoretical background

The revealed preference theory was pioneered by American economist Paul Samuelson (Samuelson, 1938). Samuelson's proposal based on the analysis of individual choices on how the actual selection of the economic agents, rather than on a priori assumptions about the interest or relationship satisfaction levels family. Thus in this theory is to understand the problems relationship corresponding interests choices are observed not inferred from an axiom system of selective preferences may stem from the first of this. Today, this theory is the essential language of the theory of social choice, and is the basis of the non-parametric testing on the premise that in the interests of the actors. It is a method of analysing choices made by individuals, mostly used

for comparing the influence of different policies and practises on consumer behaviour. This method assumes that the preferences of consumers can be 'revealed' by their purchasing habits. Revealed preferences focus on the outcomes of the choice process, while 'stated' preferences are attentive to housing preferences, desires and aspirations (Mulder, 1996; Timmermans, Molin, and van Noortwijk, 1994). According to the theory of revealed preferences, demand for a commodity by a customer can be ascertained by observing the buying pattern of the consumer.

Preference theory is a cognitive model of affective experience, dealing with the way in which people make aesthetic choices. Preference theory suggests that people tend to prefer what is typical and familiar to them (Whitfield, 1983). Purcell, Peron and Sanchez (1998) tested the preference theory in an examination of the affective experience of detached houses.

The Theory of reasoned action (TRA) was built-in 1967 and expanded corrected in time from the early 70's by Ajzen and Fishbein (1980). TRA model shows consumer trends are the best predictors of consumer behavior. For more concerned about factors contributing to the trend, then consider buying two factors are subjective attitudes and standards of our customers. In the TRA model, the attitude is measured by awareness of the properties of the product. Consumers will notice these attributes bring the necessary benefits and different level of importance. If you know the weight of that property may be close to the results predicted consumer choice. Standard subjective factors can be measured through those related to consumers (such as family, friends, colleagues,...); these people like it or not they buy. The impact of subjective factors on the standard buying trends of consumers depends: the level of support/opposition to the purchase of the consumer and the consumer's motives do accord to the wishes of those affected. The extent of the impact related to the trend of consumer behavior and motivations of consumers follow those involved are two basic elements to assess subjective standards. Affinity level of the stronger person concerned for the consumer, the greater the impact of their purchasing decisions. Consumer confidence is related to the greater the tendency to choose their purchase also affected the greater. Intent to buy consumer will be affected by these people with the level of influence of different strengths and weaknesses. In the model, the theory of rational action of each individual trust consumers about the product or brand will affect the attitude toward the behavior, and attitudes toward behavior affects buying trends rather not directly affect purchase behavior. Therefore attitude will explain the reasons for the trend of

consumers shopping, but the trend is the best factor to explain the trend of consumer behavior. TRA suggests that a person's behavioral intention depends on the person's attitude towards the behavior and subjective norm (Ramayah & Suki, 2006).

2.2. Social housing

The concept of "social housing" began to emerge from the United Kingdom, the United States of America, Canada in the 1970s and gradually spread to other countries like Japan, South Korea. Social housing is a provider for those who have no income. They were unable to earn and never earned a place to stay. These people are usually the homeless, the elderly, single parents, the disabled, the sick and helpless, who after the prison but no labor... Type this in many cases known to the philanthropist, the houses are mostly of the state, in addition to housing associations, charitable organizations engaged in part to sustain the lives of people living in social housing.

Depending on the specific circumstances of subscribers in social housing who may be completely free or low rental prices. This is usually part of the rent for charities such as churches, non-governmental organizations, the sponsors paid through funds that do not pay directly for the users fear their extravagant consumption.

Social housing is a product of the production process but social housing is considered to be a special product because it has the following characteristics: Firstly, it is a fixed asset of great value and has a long service life depending on the structural building materials. Because fixed in form and architecture should want to repair, renovate and upgrade also difficult and expensive. Secondly, the demand for housing is very rich depending on interests and abilities of each object, the design criteria are different. Third, this type of absolutely no worse in quality than you may think. It still ensures durability with the basic construction standards, just that it does not use the expensive equipment, such as low-rise buildings (under 9 floor), no elevator, no use the high-end sanitary equipment, do not use the gaudy decoration, do not have the luxury utility services such as swimming pools, tennis courts... Fourth, it has an area smaller than the apartment building, in many cases, two or three apartments share a kitchen and toilet. Fifth, it is the Government exempted from some taxes for investors as land tax. In addition, the Government also financial support through intervention to get bank loans at low interest rates,

partially supported clearance compensation (if any), supported in part by the financial interventions discount building materials... Lastly, buyers receive a discount apartment when the apartment only costs and amortized over 15-20 years without interest or very low interest rates. Investors are not disadvantaged, governments often give priority to some other works they have higher profit to compensate. Buyers can have statutory ownership. In some countries such as South Korea, due to the various incentives should not be freely traded, transferred.

2.3.The experience of a number of Asian countries in the development of social housing

The international community has focused a lot of effort into solving the housing for the poor, low-income people. Conceptually, there are certain distinctions in defining the poor and low income earners. Since then, focus on finding solutions to problem solve housing problems for the 2 groups. Housing, two groups of people with low incomes and poor general character is not capable of self-payment to buy housing on the market, they need the help of the State through the appropriate policies.

In 1960, the population of Singapore was 1.6 million people, more than 70% of them have to live in cramped quarters, old and unsanitary. 1/4 of the population lived in slums, another 1/3 live in the houses along the city spontaneously (Professor Sim Loo Lee, Head of Real Estate, National University of Singapore). And breakthroughs are created: Housing and Development Board (HDB) - was established. HDB- which is a symbol of strategic thinking. HDB has placed top priority is: the fastest growing number of houses in the shortest possible time at the lowest cost. Ending the first 5 years, HDB completed 53,777 new apartments, the average price at 4,000 SGD/unit, calculated to be about 45 minutes to launch a new home. In early 1970, 1/3 of the population lived in the house that built HDB. And in the late 1970s, officially no shortage Singaporeans to live. HDB - 20 years with the housing problem for citizens to be resolved. With a strong legal institutions, a management mechanism, strict supervision and in particular the preservation of high reputation of the government, Singapore has achieved his goal. HDB has used the mechanism to provide preferential loans and mortgage. To ensure the installment purchase money of the people, the Central Provident Fund (CPF) was born. Credit institutions closed 13% and employees pay 20% of their salary to the fund. Fund interest payment equal to

the interest rate is vase style and ability to prevent defaults by home buyers. CPF with the budget has to cover losses for HDB. Today, about 90% of Singaporeans live in high-rise apartments is quite modern but affordable price. Can reaffirm Singapore's most typical in solving housing problems for people.

Development of social housing is a key issue in Thailand and Indonesia today. Every year the Thai government supported directly from the state budget to the national housing agency (NHA) to carry out the construction of social housing in order to sell and lease installments at low prices. Thailand's experience shows that, in addition to the implementation of the direct form of State investment in the construction of social housing for sale amortization or hire low-income people, the issue of incentives to promote the development of commercial housing to contribute to solving a satisfactory relationship "supply - demand" for the real estate market is in need of attention.

The Indonesian government, the implementation of investment policies from the state budget for the construction of housing for low-income audiences. To contribute to promoting development fund for low-income people, the Government of Indonesia stipulated that each housing projects required to implement the development of the ratio of 1: 3: 6 (ie 1 unit senior housing, 3 units of housing for middle-class subjects, 6 housing units for low-income people). The above provisions is aimed at enabling communities to support each other, overcoming life split between the strata leads to inequality between groups of the rich and the poor in society.

The Indonesian government is to implement the policy also allows the fund to generate capital savings to build housing for officers and civil servants. Low-income people get loans with preferential interest rates lower than market interest rates. Loan term from 15-20 years to buy or rents. Savings Fund is also an important source for the construction of housing for low-income people are buying or leasing installments at low prices.

2.4. Social housing in Vietnam

Social housing is a type of housing owned by government agencies (possibly central or local) or the type of house is owned and managed by the state, the non-profit organization built up with the aim of providing affordable housing for some subjects in the social priorities of the

government as civil servants do not have stable housing, low-income people ... and is lease-purchase or give in to cheap compared to market price.

Social housing as provided in Section 4, Chapter 3 of the Housing Law in 2005. Social housing is defined as housing by the State or organization, individuals of all economic sectors to invest in building objects to the provisions of the Housing Law lease-purchase (the buyer must pay advance 20% of the lease-purchase housing and pay the remaining amount over time due to the provincial People's Committee regulations, but not less than 15 years and not to exceed 20 years. Upon the expiry of leasing houses, new home buyers are making procedures for the granting of certificates of house ownership. During that period, the tenant will have no right to sell the house for other concessions) under regulations prescribed by the State. This policy is the major social significance. Development of social housing by the State as free money to encourage land use and land rent, exemption related taxes. Subjects tenants are low-income people eligible officers, servants, employees, officers, professional army.

The size and quantity of social housing to the demands of the lease-purchase objects live in the area, suitable economic conditions of each local society. In Vietnam, the provincial People's Committees are responsible for: Approving and announced plans to build, planning social housing development, identifying specific types of housing, the demand for housing in the area, muscle Structural apartments for lease-purchase, with specific balance of investments and incentives to call for investment in development of social housing fund.

The capital development of social housing is formed from the lease-purchase houses under state ownership in the province, from 30% to 50% of land use development of housing projects in commercial projects and new urban centers in the province (a specific level by the provincial People's Committee for consideration and decision), local budget or capital mobilized from other lawful under the provisions of legal and voluntary funds from organizations and individuals at home and abroad.

Subjects in social housing according to the regulations of the country but usually boiled down to the state officials, the poor, people with low incomes. In Vietnam all objects have been defined in the Housing Law include: Public employees and officials, officers and professional soldiers of the People's Armed Forces receive salaries from the state budget, public people

working in economic zones, industrial parks, export processing zones, high-tech zone, the objects returned public houses which have difficulties in housing.

To be leased social housing the persons listed above must also satisfy the following conditions:

- + No property and no rent housing or hire-purchase housing not owned by the State;
- + Following houses under their ownership but the per capita area of less than 8m² floor family / person or transitional housing, damaged, dilapidated.
- + The average income of the household monthly does not exceed 5 times the total amount of social housing rent payable monthly (for apartments with floor area of up to 70m²) and not less than 4 times the amount pay monthly rent (for area apartment has an area of at least 30m²), the level of rent by the provincial People's Committee regulations.

2.4.1. Housing Development Policies

In 2005, the National Assembly enacted the Housing Law, specifically defining forms of housing development, including Development of commercial houses; Development of individual houses; Development of social houses; Development of public houses; Policies providing support and favorable conditions for those entitled to social policies (i.e. on tributors to the revolution, poor households, particularly disadvantaged households).

From 2005 up to now, mechanisms and policies have been adapted to housing needs of specific targeted groups: For low-income people having housing difficulties can rent or lease social houses; Most of social houses are apartment complexes with 30-70 m² apartments, invested by state budget with maximum 6 stories; Tenants of social houses pay monthly rent; The rent is sufficient for capital recovery, excluding land use charges, land rent, tax incentives required by the State; Lessees of social houses must pay 20% in advance and pay the remaining by amortization in 15-20 years; Officers and employees, who are transferred or circulated by work request, are entitled to leasing public houses; Contributors to the Revolution, poor households in rural and mountainous areas are supported by the State, economic organizations, social organizations and community in housing.

In 2011, the Prime Minister issued the National Housing Development Strategy up to 2020, with a vision to 2030 with fundamental substances as followed: Define role of the State in housing; Implement policies encouraging the development of commercial housing by market mechanism; Execute policies to support 08 groups having housing difficulties; Encourage the development of apartment complexes in urban areas; Increase the proportion of rental housing; Improve housing quality and develop houses in association with the system of technical and the social infrastructure.

2.4.2. Oriented housing development for low-income people in Ho Chi Minh City

On the basis of the guidelines and policies of social housing development of the State, Ho Chi Minh city will build the program, planned housing development in the province's capital in the coming years. Ho Chi Minh City considered solving housing problems for officials and public servants and workers in industrial zones and objects have difficulties in housing in urban areas is one of the important tasks that the city has been applying many solutions to solve. Ho Chi Minh City will play a key role in the development of housing in the province funds the capital in the coming years and called on the various economic sectors to participate in building the housing fund, the city will also have policies incentives for businesses to build housing - contribute to solving the shortage of housing for low-income people today.

Create clean up land to build housing for low-income people. “Clean land” for the project is a key component of development policies of housing for low-income people. "Clean Land" is land was subject to clearance, in the ready position and put into use. Orientation is given it is for housing for low-income people of the priorities on land, providing clean land fund to help enterprises to develop housing for low-income people associated with commercial projects. Maximum use of public land for housing development for low-income people. This is also the key to reducing the cost of housing.

Housing segment for each object for each different income levels. Develop diverse types of housing area, different level of comfort for sale and for rent in order to meet the needs of the market and income conditions of the population strata; encourage the development of condominiums in line with the specific conditions of each municipality to contribute to the

housing fund, saving land, creating urban civilized lifestyle; limited, advance to terminate the individual allocation to households and individuals to build houses.

Synchronous development of housing means to develop in sync with the technical infrastructure, social infrastructure, in line with planning approval authorities to contribute to improve the quality of the accommodation and development sustainable urban. Avoid build widespread lack of overall planning many negative result later.

Market development funds for the development of housing. Capital requirements for housing for low-income people between now and 2020 is huge. Social housing, the need to raise funds from the society. So the City determines will encourage all economic sectors to invest in housing development and create mechanisms for enterprises to mobilize capital logically from the people, opening up capital such as investment funds, trust funds, savings accounts, foreign capital, especially bank credit funds.

2.4.3. Performance of Social housing Programs

Vietnam has been the realization of the development strategy in the country till 2020 and vision to 2030, with the dominant view is that housing development is the responsibility of the State, society and people . In particular, the Ministry of Construction and other ministries and agencies studied, the Government issued a number of mechanisms and policies to support the development of multiple objects social housing difficulties in both urban and rural.

Table 1: Performance of Social housing Programs

| Program | Result |
|---|---|
| Decision No. 1151/QĐ-TTg | Program to develop residential and housing clusters in flooded areas of the Mekong River Delta supported over 200,000 households; Approximately 1.6 million m2 of public houses were provided to more than 129,000 teachers living in remote and extremely difficult areas. |
| Decision No. 167/2008/QĐ-TTg | Completed the support to 520,000 poor households in rural areas of the country in housing. |
| Decision No. 65/2009/QĐ-TTg (2009-2015) | 95 projects were constructed and completed with a total investment of 18,000 billion VND meeting housing needs of 500,000 students. Currently, 12,500 billion VND was allocated meeting housing needs of 330,000 students |
| Decision No. 66/2009/QĐ-TTg | 62 housing projects for workers were completed, which built 13,000 apartments valued at 2,840 billion VND; 39 ongoing projects with total capacity of 27,000 apartments valued at 6,850 billion VND. |
| Decision No. 67/2009/QĐ-TTg | 34 housing projects for low-income people were finished with 18,850 apartments valued at 5,980 billion VND; 86 ongoing projects with total capacity of 52,000 apartments valued at 23,900 billion VND. |

(Source: Department of Housing Management and Real Estate Market)

2.4.4. Demand for Social Housing Development

Table 2: Demand for social houses of low-income people

| Social houses | Unit | By now | Increase by 2013-2015 | Increase by 2016-2020 | Total by 2020 |
|------------------------------------|-------------|---------------|------------------------------|------------------------------|----------------------|
| Urban population | Head | 28,200,000 | 6,600,000 | 8,400,000 | 43,200,000 |
| People having housing difficulties | Head | 1,410,000 | 330,000 | 420,000 | 2,160,000 |
| Housing demand | m2 | 11,280,000 | 2,640,000 | 3,360,000 | 17,280,000 |

| | | | | | |
|--|----------|---------|--------|--------|---------|
| | Aparment | 282,000 | 66,000 | 84,000 | 432,000 |
|--|----------|---------|--------|--------|---------|

(Source: Department of Housing Management and Real Estate Market)

Table 3: Demand for social houses of workers

| Social houses | Unit | By now | Increase by 2013-2015 | Increase by 2016-2020 | Total by 2020 |
|---|----------|-----------|-----------------------|-----------------------|---------------|
| Number of workers seeking for a housing shelter | Head | 1,400,000 | 315,000 | 637,000 | 2,352,000 |
| Housing demand | m2 | 8,400,000 | 1,890,000 | 3,822,000 | 14,112,000 |
| | Aparment | 280,000 | 63,000 | 127,400 | 470,400 |

(Source: Department of Housing Management and Real Estate Market)

Table 4: Demand for houses of students in educational institutions

| Social houses | Unit | By now | Increase by 2013-2015 | Increase by 2016-2020 | Total by 2020 |
|--|----------|-----------|-----------------------|-----------------------|---------------|
| Number of students | Head | 3,000,000 | 500,000 | 1,000,000 | 4,500,000 |
| Number of students in need of a living place | Head | 1,800,000 | 300,000 | 600,000 | 2,700,000 |
| Housing demand | m2 | 8,820,000 | 1,800,000 | 3,600,000 | 14,220,000 |
| | Aparment | 245,000 | 50,000 | 100,000 | 395,000 |

(Source: Department of Housing Management and Real Estate Market)

2.5. Factors affecting the preferences of customer in social housing

Housing research has extensively investigated homebuyers preference for different housing characteristics. The different characteristics from the intrinsic properties such as cost and size; external attributes such as exterior design and space; or neighborhood and location attributes such as public utilities, transport, etc. relative importance of intrinsic properties and the outside also make a good subject for researchers (Opoku & Abdul- Muhmin, 2010).

2.5.1. Financial factor

Financial factors have the greatest impact customer house choice (Hinkle and Combs, 1987, p.375; Kaynak & Stevenson, 2010, p.220). The main components of the assets that need access to a great deal of capital relative and more is the cost of borrowing (Xiao & Tan, 2007, p. 865). Financial factor is the combination of four components including house price, payment term, income and mortgage loans (Yongzhou, 2009, p.17; Opoku & Abdul-Muhmin, 2010). Haddad et al. (2011) found five variables including interest rate, income, conversion, area and taxes are contained in the economic factor. Moreover, Adair et al. (1996, p.24) and Daly et al. (2003, p.306) have gathered the elements interest rate, maximum monthly payment, maximum mortgage and the length of time of payment into financial factor.

2.5.2. Location factor

Location factor is the most important factor in deciding to buy housing of an individual (Kaynak & Stevenson, as cited in Sengul et al., 2010, p.219). Housing choice of the people affected by residential location (Zabel & Kiel, as cited in Opoku & Abdul-Muhmin, 2010, p.220). In addition, the three elements distance to work, distance to the center business and distance to school is also seen as affecting housing choice of the people. There are two other elements are also considered to be location to school and width of adjacent (Opoku & Abdul-Muhmin, 2010). Moreover, approach to recreational facilities and the main roads are two factors have also been proposed (Iman et al., 2012, p.30).

2.5.3. Living space factor

Living space is the important factor affecting consumer housing decision. There are four factors including size of living room, size of kitchen, bathrooms and quantity of quantity of bedrooms are considered components of living space (Opoku & Abdul-Muhmin, 2010, p.219). Furthermore there is a relationship between the customers' purchase making process and the customer space (Graaskamp, 1981).

2.5.4. Environment factor

Environmental factor include neighborhoods, area attractiveness, view, noise from around districts and general security is defined as one of the determinants of residential decision of a household (Adair, 1996 , p.23). It is confirmed that environmental factors have a big impact on home buyers (Tajima, as cited in Opoku & Abdul-Muhmin, 2010, p.224) and it is agreed by Morel et al. (2001, p.1119). In particular, the quality of the neighborhood a great influence on the price when buying decisions at the customer's home (Gabriel & Rosenthal, 1989, p.240).

2.5.5. Subjective norm

Subjective Norm results from the way that people feel the pressure put on person to perform or not perform the behavior (Ajzen, 1991; Tonglet et al, 2004; Han and Kim, 2010). social factors and culture play an important role in the relative importance of incentives for housing is determined by religion, kinship, and social relationships (Jabareen, 2005). Consumer perceptions of the social pressure put on him by others to buy a product (Phungwong, 2010) as friends, parents, political parties, and /or an agent involved in the purchase decision (Kalafatis Et al., 1999). Attitudes of others influence purchase intent and purchase decision, in other words, that limit other people's attitudes affect purchasing decisions of customers and the selection of a particular product from different products. While others close to the customer and, higher negative for products, customers will be more likely to adjust their buying intentions. On the other hand, customer purchase intent increases if other people have different preferences for the samilar product (Ajzan & Fishbein 1980; Kotler & Keller, 2006; Ravis and Sheeran, 2003).

2.5.6. Demography

Demographic characteristics of consumers are internal factors associated with higher cognitive process (Mateja & genus Irena, 2009). Demographic characteristics carries with it the people in term of gender, age, educational status, marital status, career, the quantity of family members and children, as well as the residence property. Demographic characteristics carries with it age (Yalch & Spangenberg, 1990), education (Gattiker et al., 2000), income level (Dawson et al., 1990), gender (Zhang et al., 2007) that are factors influenced on the purchase intention of client. Significantly, gender has considerably influence on the monetary feature of

the house (Sengul et al., 2010, p.214). It is additionally confirmed that there is a big distinction in land shopping for choices to age and gender, and to not educational levels and marital status (Haddad et al., 2011). Correspondingly, during this study, gender and age characteristics are thought of as management variables so that investigate whether or not impact of these human ecology variables on housing purchase higher cognitive process of consumers or not.

2.6. Conceptual framework

Conceptual framework had been constructed in the following based on the studies from previous researchers. The objectives for this construction is to show the variables used clearly in terms of the factors which affecting the preferences of social housing. There are five independent variables included for this analysis, namely financial factor, location factor, living space factor, environment factor and subjective norm. Such independent variables are highly depending on dependent variables, which is the preferences of customer in social housing.

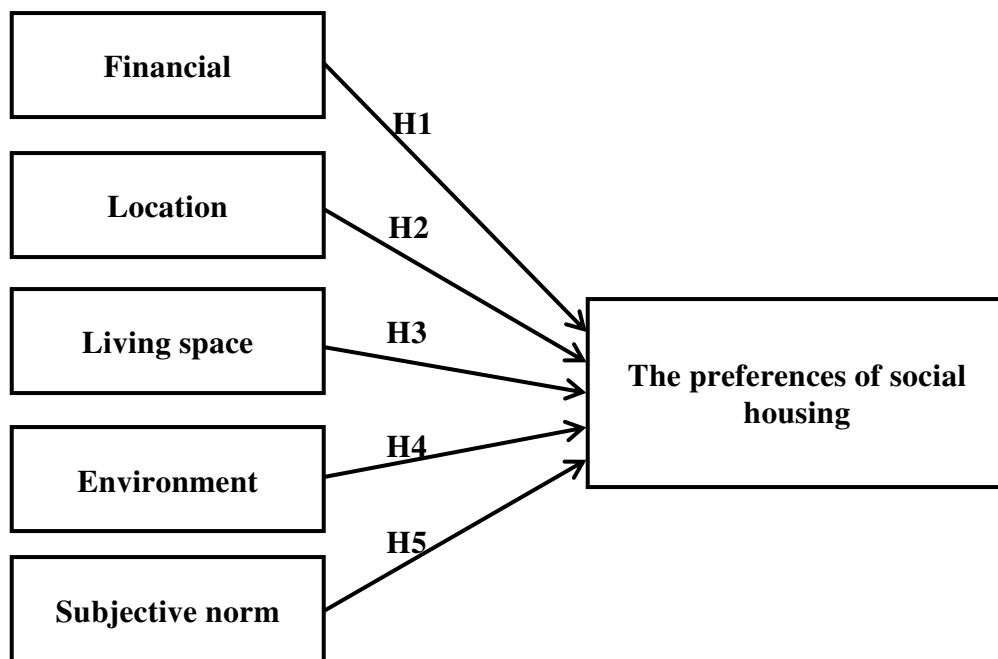


Figure 1:Conceptual framework

CHAPTER 3 – METHODOLOGY

3.1. Research methodology

Following with the discussion of literature review in chapter 2, chapter 3 discussed the methodology used. This study is a type of descriptive research that used quantitative method as method of analysis. In this paper, quantitative method is used to prove whether any predictive generalization of a theory holds true. It is a research on an existing identified problem according testing of theory, numbers measurement and analyzed by adopting statistical techniques. Typically, all the data obtained was analyzed and reported using descriptive statistics, for instance, mean, standard deviation and correlation to obtain some useful information. As for this study, questionnaires as form of survey method are used as sources of data collection and also for the discussion of findings in Chapter 4.

3.2. Variables used in the study

Five independent variables that affect the preferences in social housing are identified in this paper. These variables are divided into few categories such as financial factor, location factor, living space factor, environmental factor and subjective norm. Financial factor includes interest rate, maximum monthly payment, value of house, length of time payment; location factor include distance to central business, width of adjacent, distance to work and distance to school; living space factor include size of living room, storey of house, quantity of bathrooms and quantity of bedrooms; environment factor include area attractiveness, neighborhood, noise from around districts and general security. Besides, subjective norm include builder's reputation, advices from family members, perceived of risks and restriction of the house.

3.3. Sampling

The survey was conducted in Ho Chi Minh City. The sample was selected using a nonprobability sampling technique-convenience sample. Target respondents of this survey were workers and civil servants who are in need of housing in Ho Chi Minh City.

First, The study was conducted on 15 samples to detect the flaws of the questionnaire. Then the study was conducted after the questionnaire was completed from the qualitative

research results. Sample size was 200 persons (including workers and civil servants) in Ho Chi Minh City.

3.4.Data collection and procedure

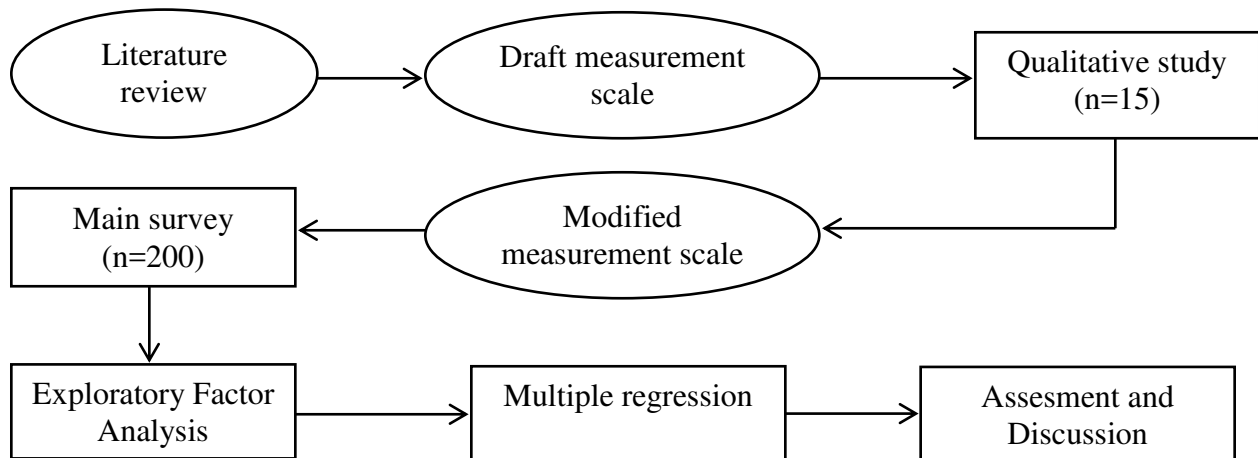


Figure 2:Research process

Collecting data process of this study was conducted in Ho Chi Minh City. The current study involved mainly of two stages, a qualitative phase followed by a quantitative phase. The survey questionnaire was firstly designed in English and then translated into Vietnamese by the researcher with the support of some English experts. Regarding to the qualitative phase, the Vietnamese version of the survey questionnaire was pre-tested using in-depth interviews during two weeks with fifteen people who were colleagues of the researcher to check whether they understood clearly about the scale or not. The in-depth interview ensured that the final questions would be well understood by respondents and they were valuable in measuring observed variables before launching the main survey. The procedure of conducting in-depth interviews started with identifying the purposes of the research in terms of what information needed gathering. Then the detailed questionnaire was shown to the interviewees for checking their understanding. During the interview, the author also would like to find out the suitability of choosing the measurement scales for conducting the research in Vietnam. All the comments from the interviewees were checked in order to modify the measurement scale. Based on the feedback of respondents, all the items were easily understood.

After that, the survey was conducted in mass. It aimed to collect data for testing the research's hypotheses. Participants self-completed a survey with most of items were measured by seven-point Likert scale, anchor points including "Entirely Unimportant" (=1), "Mostly Unimportant" (=2), "Somewhat Unimportant" (=3), "Neither Important nor Unimportant" (=4), "Somewhat Important" (=5), "Mostly Important" (=6), "Entirely Important" (=7).

3.5. Design of questionnaire

The questionnaire is a common tool in the social sciences and business studies to collect data from subjects to measure the structure being investigated. However, the design of a questionnaire is an important issue in a study related to the collection of attitude from the subjects. That is because the questions serve as a communication between researchers and subjects, and it is only communication channel in case self-completion questions, as in the case of this study.

200 structured questionnaires were distributed for collecting the opinions of workers and civil servants. All questions from the question has been passed on to the local context and are derived from past housing researchers. Before the distribution of questionnaires to target respondents in Ho Chi Minh City, a pilot test was conducted to ensure the relevance of the questions was applied and all questions is understandable. Besides, it is also to ensure high quality of the questionnaire has been produced before the distribution to the target respondents. There, the researchers have collected 15 sets of survey questionnaires from his friends before the analysis of the questions in the questionnaire. Feedback gathered from the questionnaires were analyzed using Statistical Package for the Social Sciences (SPSS) version 16 to perform reliability checks and determine any question irrelevant questions on the questionnaire. Therefore, the question is not relevant it will be removed from the list of questions. The questions are divided into three main sections as a questionnaire based on the demographic profile, the dependent variable and independent variables.

3.6. Hypotheses assumption

The researcher expected there are some relationship between the factors of independent variables and dependent variables in this study. To prove the relationship on these factors, testing

of hypotheses need to be carried out. In this study, dependent variable refers to the preferences of social housing while the independent variables refer to the financial factor, location factor, living space factor, environment factor and subjective norm. Hence, assumptions of hypotheses among these variables are described as follows:

H1. There is a positive impact of financial factor on the preferences of social housing.

H2. There is a positive impact of location factor on the preferences of social housing.

H3. There is a positive impact of living space factor on the preferences of social housing.

H4. There is a positive impact of environment factor on the preferences of social housing.

H5. There is a positive impact of subjective norm on the preferences of social housing.

CHAPTER 4 – FINDINGS AND INTERPRETATION

4.1. Descriptive analysis

4.1.1. Sample description

According to results of the survey, which provides information regarding demographic profiles of people interviewed in the survey. The total number of people interviewed is 200 people. Among 200 responses received, there are 55.5% males and 44.5% females.

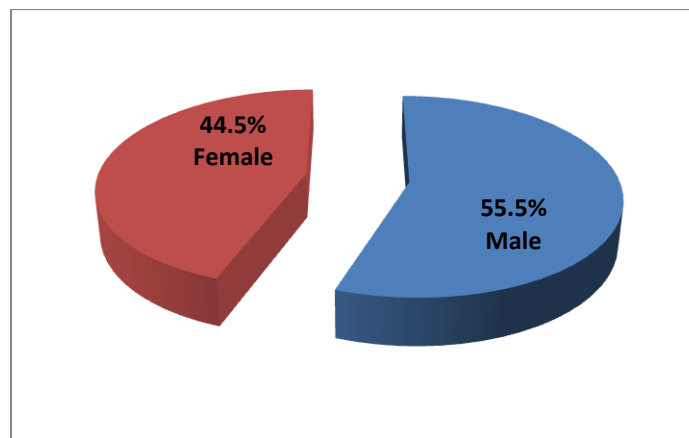


Figure 3: Gender of respondents

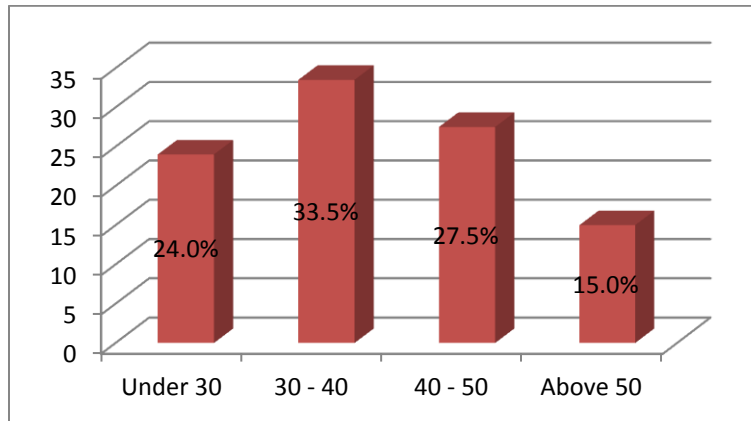


Figure 4: Age of respondents

Regarding the age of respondents, taking a group of age from 30-40 is largely up to 33.5%, following by group of age between 40-50, which make 27.5%. The youngest age group under 30 accounting for 24% and the oldest group (above 50) is also the smallest group with only 15%. Data show that, at ages 30 to 50 who have the ability to buy a home and have the highest housing needs.

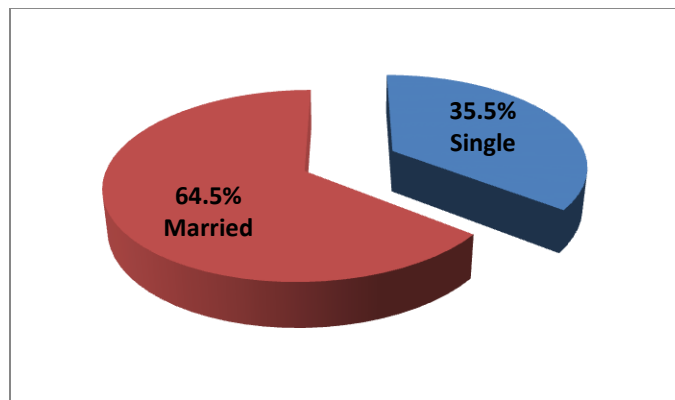


Figure 5: Marital status of respondents

Among 200 respondents of the survey, 64.5% of them said that they got married and 35.5% is single. The data above shows, the demand for housing has married people are great and needed to settle.

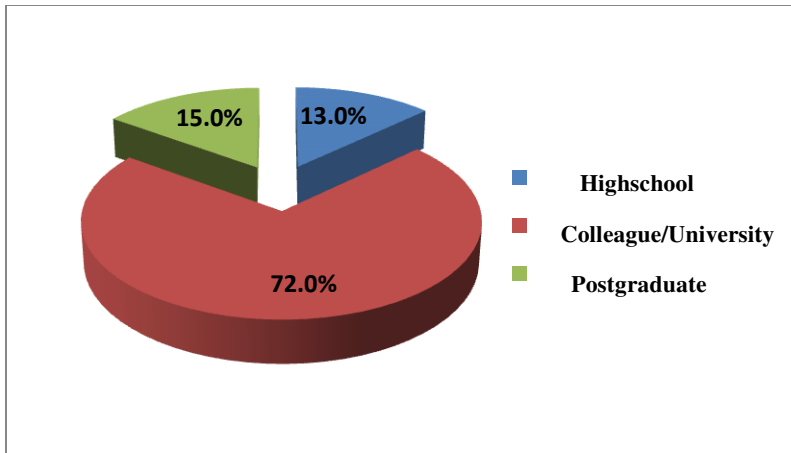


Figure 6: Education level of respondents

In term of education level, there is 72% of respondents have an education level Colleague or University. The 28% left is divided equally in two groups: highschool (13%) and Postgraduate(15%).

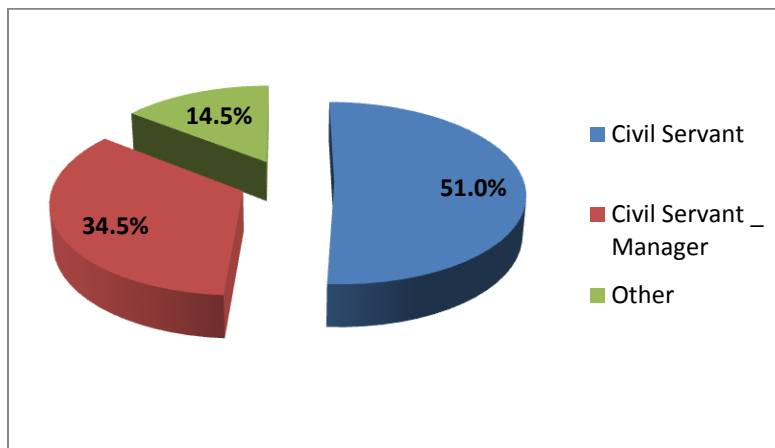


Figure 7: Jobs category of respondents

Among the respondents, the number of civil servant is the largest part between groups of job on the survey. Following by is the civil servant – manager that taking part of 34.5% and the other kind of jobs accounting for 14.5%.

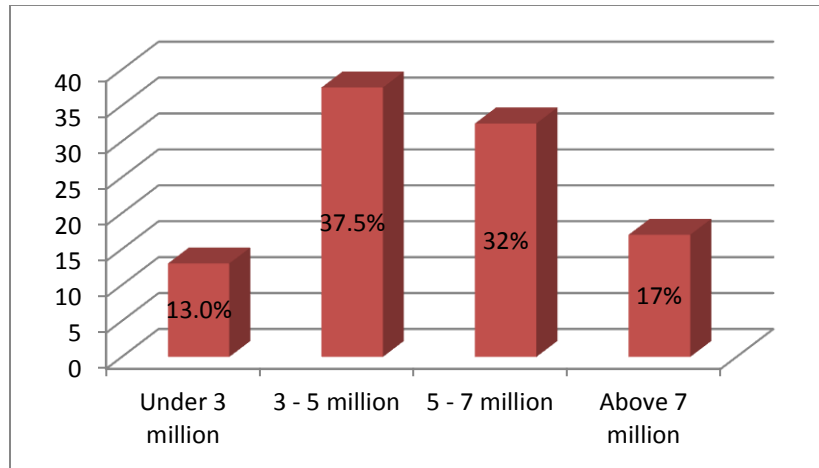


Figure 8: Income of respondents

According to the survey result, most of respondents have income range from 3 to 5 million VND with 37.5% of total interviewee. While this number of people who have income from 5 to 7 million VND is 32%. There are 17% of them have the income above 7 million VND and only 13% of respondents answer that they have monthly income under 3 million VND.

4.1.2. Descriptive analysis

4.1.2.1. Financial

Most respondents (more than 60%) think that the interest rate and their ability to pay for the bank are important to them in decision of buying social housing. Whereas there were 33% of respondents chose neutral when asking about if the value of house is important to them.

Table 5: Descriptive statistic for Financial

| No. | Financial | Frequencies | | | | | Mean | Std. Deviation |
|-----|-----------|---|----------------------|---------|-------------------|-------|------|-------------------|
| | | (The number of people interviewed and the percentage ratio between total) | | | | | | |
| | | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | | |

| | | | | | | | | |
|---|-------------------------|------|-------|-------|-------|-------|------|-------|
| 1 | Interest rate | 8 | 29 | 41 | 57 | 65 | 4.84 | 1.43 |
| | | 4.0% | 14.5% | 20.5% | 28.5% | 32.5% | | |
| 2 | Maximum monthly payment | 7 | 34 | 29 | 69 | 61 | 4.85 | 1.392 |
| | | 3.5% | 17.0% | 14.5% | 34.5% | 30.5% | | |
| 3 | Value of house | 4 | 23 | 66 | 71 | 36 | 4.60 | 1.08 |
| | | 2.0% | 11.5% | 33.0% | 35.5% | 18.0% | | |
| 4 | Length of payment time | 0 | 22 | 57 | 51 | 70 | 4.98 | 1.213 |
| | | 0.0% | 11.0% | 28.5% | 25.5% | 35.0% | | |

4.1.2.2. Location

Relating the factor of Location, the following table shows that the most important factor for respondents when choosing social house is that it is near to their working place. 64% of total respondents agreed with this statement, making the highest mean value of this group 4.98.

However more than 50% of total respondents said that the width of adjacent was not important factor in their decision to choose social housing, making the lowest mean value of this group 3.57.

Table 6: Descriptive statistic for Location

| No. | Location | Frequencies | | | | | Mean | Std. Deviation |
|-----|-------------------|---|----------------------|---------|-------------------|-------|------|-------------------|
| | | (The number of people interviewed and the percentage ratio between total) | | | | | | |
| | | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | | |
| 1 | Width of adjacent | 43 | 60 | 45 | 38 | 14 | 3.57 | 1.316 |

| | | | | | | | | |
|---|------------------------------|-------|-------|-------|-------|-------|------|-------|
| | | 21.5% | 30.0% | 22.5% | 19.0% | 7.0% | | |
| 2 | Distance to central business | 22 | 44 | 67 | 41 | 26 | 4.07 | 1.356 |
| | | 11.0% | 22.0% | 33.5% | 20.5% | 13.0% | | |
| 3 | Distance to school | 41 | 39 | 56 | 39 | 25 | 3.83 | 1.463 |
| | | 20.5% | 19.5% | 28.0% | 19.5% | 12.5% | | |
| 4 | Distance to work | 4 | 18 | 50 | 63 | 65 | 4.98 | 1.262 |
| | | 2.0% | 9.0% | 25.0% | 31.5% | 32.5% | | |

4.1.2.3. Living space

According to the above table, the most noticeable feature of descriptive analysis is that there were very low percentage of disagree for question relating to size of living room. While over 40% of respondents agreed that the quantity of bedrooms is important to them, there were only 20% disagreed with this statement. There were 40.5% of interviewees said that the storey of the house is not important factor in choosing social house.

Table 7: Descriptive statistic for Living space

| No. | Living Space | Frequencies (The number of people interviewed and the percentage ratio between total) | | | | | Mean | Std. Deviation |
|-----|-----------------------|--|-------------------|---------|----------------|-------|------|----------------|
| | | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | | |
| 1 | Quantity of bathrooms | 13 | 59 | 74 | 43 | 11 | 3.92 | 1.031 |
| | | 6.5% | 29.5% | 37.0% | 21.5% | 5.5% | | |

| | | | | | | | | |
|---|----------------------|-------|-------|-------|-------|------|------|-------|
| 2 | Quantity of bedrooms | 8 | 32 | 71 | 73 | 16 | 4.29 | 1.025 |
| | | 4.0% | 16.0% | 35.5% | 36.5% | 8.0% | | |
| 3 | Size of living room | 46 | 67 | 51 | 32 | 4 | 3.36 | 1.161 |
| | | 23.0% | 33.5% | 25.5% | 16.0% | 2.0% | | |
| 4 | Storey of house | 36 | 45 | 67 | 36 | 16 | 3.76 | 1.262 |
| | | 18.0% | 22.5% | 33.5% | 18.0% | 8.0% | | |

4.1.2.4. Environment

In term of environment factor, most of respondents agreed that general security is the most important factor in this group with the highest mean value of 4.88. Looking at the low point of agreement (27.5%) it is somehow saying that the factor of area attractiveness is not important for most of respondents. There were more than 40% of total respondents said that the neighborhood and the noise from around districts are one of the important factors to them when choosing social housing.

Table 8: Descriptive statistic for Environment

| No. | Environment | Frequencies (The number of people interviewed and the percentage ratio between total) | | | | | Mean | Std. Deviation |
|-----|--------------|--|-------------------|---------|----------------|-------|------|----------------|
| | | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | | |
| 1 | Neighborhood | 21 | 32 | 65 | 52 | 30 | 4.26 | 1.326 |

| | | | | | | | | |
|---|-----------------------------|-------|-------|-------|-------|-------|------|-------|
| | | 10.5% | 16.0% | 32.5% | 26.0% | 15.0% | | |
| 2 | Area attractiveness | 34 | 49 | 62 | 46 | 9 | 3.75 | 1.185 |
| | | 17.0% | 24.5% | 31.0% | 23.0% | 4.5% | | |
| 3 | Noise from around districts | 13 | 52 | 67 | 37 | 31 | 4.15 | 1.268 |
| | | 6.5% | 26.0% | 33.5% | 28.5% | 15.5% | | |
| 4 | General security | 3 | 21 | 43 | 82 | 52 | 4.88 | 1.166 |
| | | 1.5% | 10.5% | 21.5% | 40.5% | 26.0% | | |

4.1.2.5. Subjective norm

Regarding the subjective norm, most of the respondents agreed that Restriction of the social housing and Builder's reputation are important in their decision of buying social housing. Besides there were more than 40% of the respondents agreed that they considered the advices from family member when making decision of buying social housing.

Table 9: Descriptive statistic for Subjective norm

| No. | Subjective norm | Frequencies (The number of people interviewed and the percentage ratio between total) | | | | | Mean | Std. Deviation |
|-----|----------------------|--|----------|---------|-------|----------------|------|----------------|
| | | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | | |
| 1 | Builder's reputation | 15 | 33 | 38 | 54 | 60 | 4.62 | 1.38 |
| | | 7.5% | 16.5% | 19.0% | 27.0% | 30.0% | | |

| | | | | | | | | |
|---|-----------------------------------|-------|-------|-------|-------|-------|------|-------|
| 2 | Perceived of risks | 24 | 47 | 55 | 42 | 32 | 4.09 | 1.411 |
| | | 12.0% | 23.5% | 27.5% | 21.0% | 16.0% | | |
| 3 | Advices from family members | 10 | 31 | 66 | 43 | 50 | 4.52 | 1.319 |
| | | 5.0% | 15.5% | 33.0% | 21.5% | 25.0% | | |
| 4 | Restriction of the social housing | 13 | 31 | 39 | 49 | 68 | 4.78 | 1.468 |
| | | 6.5% | 15.5% | 19.5% | 24.5% | 34.0% | | |

4.1.2.6. Preferences

According to the following table, there were 51.5% of people chose to agree, 19.5% chose disagree, and 19% chose neutral when they were asked about if they purchase a house, they will definitely choose social housing. Among the factor that affect to their decision of purchasing social house, nearly 50% of respondents said that the price is the most important factor, following is the size, convenient place and quality receiving agreement of more than 20% of total respondents.

Table 10: Descriptive statistic for Preferences

| No. | The preferences of customer in social housing | Frequencies (The number of people interviewed and the percentage ratio between total) | | | | | Mean | Std. Deviation |
|-----|---|--|-------------------|---------|----------------|-------|------|----------------|
| | | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | | |
| 1 | I purchase social | 33 | 34 | 35 | 53 | 45 | 4.26 | 1.602 |

| | | | | | | | | |
|---|--|-------|-------|-------|-------|-------|------|-------|
| | housing because its prices is reasonable | 16.5% | 17.0% | 17.5% | 26.5% | 22.5% | | |
| 2 | I purchase social housing because its size is acceptable | 38 | 46 | 38 | 53 | 25 | 3.89 | 1.467 |
| | | 19.0% | 23.0% | 19.0% | 26.5% | 12.5% | | |
| 3 | I purchase social housing because its quality is acceptable | 51 | 56 | 51 | 29 | 13 | 3.43 | 1.347 |
| | | 25.5% | 28.0% | 25.5% | 14.5% | 6.5% | | |
| 4 | I purchase social housing because it is convenient place | 47 | 51 | 56 | 33 | 13 | 3.50 | 1.371 |
| | | 23.5% | 25.5% | 28.0% | 16.5% | 6.5% | | |
| 5 | If I purchase a house, I will definitely choose social housing | 26 | 33 | 38 | 54 | 49 | 4.41 | 1.518 |
| | | 13.0% | 16.5% | 19.0% | 27.0% | 24.5% | | |

4.2. Reliability analysis

The reliability analysis was performed to test the validity of the question for the variables of this study. Then, the characteristics of independent, dependent variables and correlation between variables will be analyzed. In addition, the reliability of measurement scale were analyzed using analytical methods Cronbach's alpha. Like this, the only reliable scales with Alpha coefficients of each scale Cronbach 'equal to or greater than 0.7 (Pallant, 2011). Conversely, the less valuable scales 0.3 will be removed to improve the reliability of the measurement scales.

Table 11: Summary of variables' Reliability statistic

| No. | Variables | Items | Number of items | Cronbach's Alpha |
|-----|-----------------|-------------|-----------------|------------------|
| 1 | Financial | FA1 – FA4 | 4 | 0.805 |
| 2 | Location | LOC1 – LOC4 | 4 | 0.845 |
| 3 | Living space | LS1 – LS4 | 4 | 0.772 |
| 4 | Environment | EV1 – EV4 | 4 | 0.828 |
| 5 | Subjective norm | SN1 – SN4 | 4 | 0.719 |
| 6 | Preferences | PRE1 – PRE5 | 5 | 0.867 |

As the above Cronbach's Alpha values of factors, which fluctuate from 0.719 to 0.867 demonstrated that the questions are designed efficiently and meet the requirements for measuring the variables in this study. These results also have high reliability and support for research purposes.

Table 12: Reliability analysis: Item-Total Statistics

| Construct | Variables | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|------------------|---|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| Financial | Financial:Cronbach's alpha = 0.805 | | | | |
| | FA1 | 14.42 | 8.628 | 0.719 | 0.705 |
| | FA2 | 14.42 | 8.807 | 0.722 | 0.703 |
| | FA3 | 14.67 | 11.842 | 0.498 | 0.809 |
| | FA4 | 14.29 | 10.760 | 0.563 | 0.782 |
| Location | Location:Cronbach's alpha = 0.845 | | | | |

| | | | | | |
|------------------------|--|-------|--------|-------|-------|
| | LOC1 | 12.88 | 12.528 | 0.611 | 0.833 |
| | LOC2 | 12.38 | 10.920 | 0.803 | 0.749 |
| | LOC3 | 12.62 | 10.427 | 0.782 | 0.757 |
| | LOC4 | 11.48 | 13.346 | 0.544 | 0.858 |
| Living space | Living space:Cronbach's alpha = 0.772 | | | | |
| | LIV1 | 11.41 | 7.660 | 0.578 | 0.718 |
| | LIV2 | 11.04 | 7.562 | 0.604 | 0.706 |
| | LIV3 | 11.96 | 7.164 | 0.564 | 0.724 |
| | LIV4 | 11.57 | 6.709 | 0.569 | 0.726 |
| Environment | Environment:Cronbach's alpha = 0.828 | | | | |
| | EV1 | 12.79 | 8.860 | 0.705 | 0.760 |
| | EV2 | 13.30 | 10.490 | 0.559 | 0.824 |
| | EV3 | 12.89 | 9.144 | 0.708 | 0.758 |
| | EV4 | 12.16 | 10.004 | 0.654 | 0.784 |
| Subjective norm | Subjective norm: Cronbach's alpha = 0.719 | | | | |
| | SN1 | 13.38 | 10.116 | 0.556 | 0.627 |
| | SN2 | 13.92 | 9.937 | 0.559 | 0.625 |
| | SN3 | 13.49 | 11.437 | 0.418 | 0.706 |
| | SN4 | 13.23 | 10.098 | 0.498 | 0.663 |

| | | | | | |
|--------------------|--|-------|--------|-------|-------|
| Preferences | Preferences: Cronbach's alpha = 0.867 | | | | |
| | PRE1 | 15.22 | 21.120 | 0.769 | 0.819 |
| | PRE2 | 15.60 | 22.834 | 0.714 | 0.833 |
| | PRE3 | 16.06 | 24.997 | 0.608 | 0.859 |
| | PRE4 | 15.98 | 24.678 | 0.620 | 0.856 |
| | PRE5 | 15.08 | 22.100 | 0.743 | 0.826 |

As all of the Corrected Item-Total Correlation values were over 0.3. This proved the scale designed for this study is valuable in statistic and has the required reliability. It also demonstrated the five factors (Financial, Location, Living condition, Environment and Subjective norm) that affect to preferences of social housing are qualified for the linear regression analysis.

4.3. Exploratory Factor Analysis (EFA)

4.3.1 EFA for Independent variables

4.3.1.1 Round 1

According to the research model, there are 5 factors with 20 variables affecting the preferences of customer in social housing. The exploratory factor analysis and the Varimax rotation were tested to analyze the 20-observed variables. Kaiser-Mayer-Olkin (KMO) test used to measure the compatibility of samples.

Table 13: KMO and Bartlett's Test of Independent variable

| | | |
|--|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .849 |
| Bartlett's Test of | Approx. Chi-Square | 1.913E3 |

| | | |
|------------|------|------|
| Sphericity | df | 190 |
| | Sig. | .000 |

The result of KMO test showed that values of all variables are all bigger than 0.7 and the Barlett's test significant was smaller than 0.05. This mean observed variables had the correlation with each other and EFA factors analysis was appropriate since the results meet the requirements of EFA method.

The entire 20 items are grouped into 5 sets of components characterized by 5 Eigen values larger than 1. This number of components is exactly the number of predicted factors at the beginning. The cumulative percentage of variance is 65.931%, meaning that 5 components can explain 65.931% of the data variability.

Table 14: Rotated Component Matrix^a – Round 1

| | Component | | | | |
|-------------------------------------|-----------|---|------|---|------|
| | 1 | 2 | 3 | 4 | 5 |
| Environment 1 (Neighborhood) | .774 | | | | |
| Environment 3 (Noise) | .729 | | | | |
| Environment 4 (Security) | .696 | | | | |
| Environment 2 (Attractiveness Area) | .632 | | | | |
| Living Space 3 (Livingroom) | .611 | | .465 | | |
| Living Space 4 (Storey) | .584 | | | | .473 |

| | | | | | |
|--|--|------|------|------|------|
| Financial 1 (Interest) | | .832 | | | |
| Financial 2 (Payment) | | .809 | | | |
| Financial 4 (Length Payment) | | .691 | | | |
| Financial 3 (Value House) | | .627 | | | |
| Location 2 (Market) | | | .810 | | |
| Location 3 (School) | | | .807 | | |
| Location 1 (Width Adjacent) | | | .740 | | |
| Location 4 (Work) | | .413 | .526 | | |
| Subjective Norm 3 (Advice Family) | | | | .784 | |
| Subjective Norm 2 (Perceived Risk) | | | | .731 | |
| Subjective Norm 4 (Restriction) | | | | .644 | |
| Subjective Norm 1 (Builder Reputation) | | | | .615 | |
| Living Space 2 (Bedroom) | | | | | .813 |
| Living Space 1 (Bathroom) | | | | | .767 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

After running four times, there were three variables were removed, they were Living space 3, Living space 4 and Location 4. All others variables were suitable for these above rules that have factor loading more than 0.50. This result also showed that KMO was 0.825, Barlett's test significant was 0.000, Total Variance Explained was 68.985%, and five components were extracted. All new factors were also renamed as following:

Factor 1 – Financial: FA1, FA2, FA4 and FA3.

Factor 2 – Environment: EV3, EV1, EV4 and EV2.

Factor 3 – Location: LO3, LO2 and LO1.

Factor 4 - Subjective norm: SN3, SN2, SN4 and SN1.

Factor 5 – Living space: LS2 and LS1.

Table 15: KMO and Bartlett's Test – Round 4

| | | |
|--|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .825 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1.522E3 |
| | df | 136 |
| | Sig. | .000 |

Table 16: Rotated Component Matrixa – Round 4

| | Component | | | | |
|--|-----------|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| | | | | | |

| | | | | | |
|--|------|------|------|------|--|
| Financial 1 (Interest) | .822 | | | | |
| Financial 2 (Payment) | .794 | | | | |
| Financial 4 (Length Payment) | .722 | | | | |
| Financial 3 (Value House) | .669 | | | | |
| Environment 3 (Noise) | | .796 | | | |
| Environment 1 (Neighborhood) | | .787 | | | |
| Environment 4 (Security) | | .759 | | | |
| Environment 2 (Attractiveness Area) | | .663 | | | |
| Location 3 (School) | | | .815 | | |
| Location 2 (Market) | | | .806 | | |
| Location 1 (Width Adjacent) | | | .776 | | |
| Subjective Norm 3 (Advice Family) | | | | .782 | |
| Subjective Norm 2 (Perceived Risk) | | | | .747 | |
| Subjective Norm 4 (Restriction) | | | | .638 | |
| Subjective Norm 1 (Builder Reputation) | | | | .609 | |

| | | | | | |
|---------------------------|--|--|--|--|------|
| Living Space 2 (Bedroom) | | | | | .830 |
| Living Space 1 (Bathroom) | | | | | .818 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

4.3.2 EFA for Dependent variable

Preference of customer in social housing is the dependent variable with 5 observed variables. The table below revealed the EFA result:

Table 17: KMO and Bartlett's Test of Dependent variable

| | | |
|--|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .849 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1.913E3 |
| | df | 190 |
| | Sig. | .000 |

The value of KMO of 0.849 which is greater than 0.7 and Bartlett's test significant which is smaller than 0.5 of this factor was met, therefore EFA analysis is also appropriate.

As the results mentioned in the below table, the factor loading of most of variables were larger than 0.5, therefore, we could conclude that EFA analysis for this case had practical significant.

Table 18: Component Matrix^a

| | Component |
|--------------------------|-----------|
| | 1 |
| Preference 1 (Price) | .867 |
| Preference 5 (Intention) | .847 |
| Preference 2 (Size) | .827 |
| Preference 4 (Location) | .752 |
| Preference 3 (Quality) | .741 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Through the result from EFA and Cronbach Alpha Reliability Analysis, the measurement scales of the research model were tested and confirmed as valid and reliable.

4.4. Correlation analysis

Normality test is used to check if data is normal distributed or not. In addition, Test of normality is used as a popular way before any statistics tests are done. In this research, the Kolmogorov-Smirnova is used for to decide if a sample comes from a population with a specific distribution and the data set is normal distributed or not (itl.nist.gov, 2015). In the test of Kolmogorov-Smirnova, the significant values are all less than 0.05. Thus, we can confirm that the data is **not** normal distributed.

And correlation analysis is used in this research with the purpose of measure the relationship among each independent variable and other independent variables and the relationship between a dependent variable and other independent variables.

From the normality test above, the data is confirmed not to be normal distributed. Thus, Pearson correlation analysis cannot be used for its assumption because the normality is not met. Instead of that, Spearman's Correlation Analysis can be used to test the relationship between pairs of variables in case of data abnormal distribution.

Table 19: Correlations between Financial and Preferences

| | | | Average of Financial | Average of Preferences |
|----------------|------------------------|-------------------------|----------------------|------------------------|
| Spearman's rho | Average of Financial | Correlation Coefficient | 1.000 | .494** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 200 | 200 |
| | Average of Preferences | Correlation Coefficient | .494** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 200 | 200 |

**. Correlation is significant at the 0.01 level (2-tailed).

In the table above: Spearman's rho correlation is moderate (0.494), indicating that Financial (independent variable) has a positive relation with Preferences (dependent variable) through the association is moderate.

Table 20: Correlations between Location and Preferences

| | | | Average of Location | Average of Preferences |
|--|--|--|---------------------|------------------------|
| | | | | |

| | | | | |
|----------------|------------------------|-------------------------|--------|--------|
| Spearman's rho | Average of Location | Correlation Coefficient | 1.000 | .397** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 200 | 200 |
| | Average of Preferences | Correlation Coefficient | .397** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 200 | 200 |

** . Correlation is significant at the 0.01 level (2-tailed).

In the table above: Spearman's rho correlation is moderate (0.397), indicating that Location (independent variable) has a positive relation with Preferences (dependent variable) through the association is moderate.

Table 21: Correlations between Living space and Preferences

| | | | Average of Living space | Average of Preferences |
|----------------|-------------------------|-------------------------|-------------------------|------------------------|
| Spearman's rho | Average of Living space | Correlation Coefficient | 1.000 | .244** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 200 | 200 |
| | | Average of Preferences | .244** | 1.000 |

| | | | |
|--|-----------------|------|-----|
| | Sig. (2-tailed) | .000 | . |
| | N | 200 | 200 |

**. Correlation is significant at the 0.01 level (2-tailed).

In the table above: Spearman's rho correlation is quite low (0.244), indicating that Living space (independent variable) has a positive relation with Preferences (dependent variable) through the association is quite weak.

Table 22: Correlations between Environment and Preferences

| | | | Average of Environment | Average of Preferences |
|----------------|------------------------|-------------------------|------------------------|------------------------|
| Spearman's rho | Average of Environment | Correlation Coefficient | 1.000 | .381** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 200 | 200 |
| | Average of Preferences | Correlation Coefficient | .381** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 200 | 200 |

**. Correlation is significant at the 0.01 level (2-tailed).

In the table above: Spearman's rho correlation is moderate (0.381), indicating that Environment (independent variable) has a positive relation with Preferences (dependent variable) through the association is moderate.

Table 23: Correlations between Subjective norm and Preferences

| | | | Average of Subjective norm | Average of Preferences |
|----------------|----------------------------|-------------------------|----------------------------|------------------------|
| Spearman's rho | Average of Subjective norm | Correlation Coefficient | 1.000 | .322 ** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 200 | 200 |
| | Average of Preferences | Correlation Coefficient | .322 ** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 200 | 200 |

**. Correlation is significant at the 0.01 level (2-tailed).

In the table above: Spearman's rho correlation is moderate (0.322), indicating that Subjective norm (independent variable) has a positive relation with Preferences (dependent variable) through the association is moderate.

4.5. Regression analysis

Based on the results of correlation analysis, regression analysis model was built with four independent variables and one dependent variable.

4.5.1 Single regression

Table 24: Single regression for H1

| Independent Variable | Dependent Variable (Y-Preferences of social housing) | | | | |
|--|--|------------|---------------------------|-------|-------|
| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. Error | Beta | | |
| (Constant) | -1.161E-016 | 0.060 | | 0.000 | 1.000 |
| X ₁ – Financial | 0.522 | 0.061 | 0.522 | 8.603 | 0.000 |
| R = 0.522; R ² = 0.272; Adjusted R ² = 0.268; F = 74.019; Sig. = 0.000 | | | | | |

The result of single regression presented in the above table indicates that public Financial is correlated to Preferences of social housing because of the significant level of p (sig. = .000). The correlation coefficient R is 0.522 showing a moderate relationship between Financial and the Preferences of social housing. The value of R² = 0.272 also shows the prediction of the variance in trust in the Preferences of social housing by Financial. 27.2% of the variance in trust in the Preferences of social housing can be explained by public Financial. The value of F = 74.019 and its significance value of 0.000 mean that Financial can explain well the variation in Preferences of social housing. In addition, that the t value is 8.603, higher than 2, with the significant level at 0.000 means that this independent variable is significantly contributing to the equation for predicting Preferences of social housing.

Table 25: Single regression for H2

| Independent Variable | Dependent Variable (Y-Preferences of social housing) | | | |
|----------------------|--|---------------------------|---|------|
| | Unstandardized Coefficients | Standardized Coefficients | T | Sig. |

| | B | Std. Error | Beta | | |
|--|------------|------------|-------|-------|-------|
| (Constant) | 6.919E-017 | 0.064 | | 0.000 | 1.000 |
| X ₂ – Location | 0.425 | 0.064 | 0.425 | 6.610 | 0.000 |
| R = 0.425; R ² = 0.181; Adjusted R ² = 0.177; F = 43.692; Sig. = 0.000 | | | | | |

The result of single regression presented in the above table indicates that public Location is correlated to Preferences of social housing because of the significant level of p (sig. = .000). The correlation coefficient R is 0.425 showing a moderate relationship between Location and the Preferences of social housing. The value of R² = 0.181 also shows the prediction of the variance in trust in the Preferences of social housing by Location. 18.1% of the variance in trust in the Preferences of social housing can be explained by public Location. The value of F = 43.692 and its significance value of 0.000 mean that Location can explain well the variation in Preferences of social housing. In addition, that the t value is 6.610, higher than 2, with the significant level at 0.000 means that this independent variable is significantly contributing to the equation for predicting Preferences of social housing.

Table 26: Single regression for H3

| Independent Variable | Dependent Variable (Y-Preferences of social housing) | | | | |
|--|--|------------|---------------------------|-------|-------|
| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. Error | Beta | | |
| (Constant) | 1.770E-017 | 0.069 | | 0.000 | 1.000 |
| X ₃ – Living space | 0.220 | 0.069 | 0.220 | 3.173 | 0.000 |
| R = 0.220; R ² = 0.048; Adjusted R ² = 0.044; F = 10.070; Sig. = 0.000 | | | | | |

The result of single regression presented in the above table indicates that public Living space is correlated to Preferences of social housing because of the significant level of p (sig. = .000). The correlation coefficient R is 0.220 showing a weak relationship between Living space and the Preferences of social housing. The value of $R^2 = 0.048$ also shows the prediction of the variance in trust in the Preferences of social housing by Living space. 4.8% of the variance in trust in the Preferences of social housing can be explained by public Living space. The value of $F = 10.0070$ and its significance value of 0.000 mean that Living space can explain well the variation in Preferences of social housing. In addition, that the t value is 3.173, higher than 2, with the significant level at 0.000 means that this independent variable is significantly contributing to the equation for predicting Preferences of social housing.

Table 27: Single regression for H4

| Independent Variable | Dependent Variable (Y-Preferences of social housing) | | | | |
|--|--|------------|---------------------------|-------|-------|
| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. Error | Beta | | |
| (Constant) | -1.063E-018 | 0.066 | | 0.000 | 1.000 |
| X ₄ – Environment | 0.376 | 0.066 | 0.376 | 5.716 | 0.000 |
| R = 0.376; $R^2 = 0.142$; Adjusted $R^2 = 0.137$; F = 32.677; Sig. = 0.000 | | | | | |

The result of single regression presented in the above table indicates that public Environment is correlated to Preferences of social housing because of the significant level of p (sig. = .000). The correlation coefficient R is 0.376 showing a quite weak relationship between Environment and the Preferences of social housing. The value of $R^2 = 0.142$ also shows the prediction of the variance in trust in the Preferences of social housing by Environment. 14.2% of the variance in trust in the Preferences of social housing can be explained by public Environment. The value of $F = 32.677$ and its significance value of 0.000 mean that Environment can explain well the variation in Preferences of social housing. In addition, that the t

value is 5.716, higher than 2, with the significant level at 0.000 means that this independent variable is significantly contributing to the equation for predicting Preferences of social housing.

Table 28: Single regression for H5

| Independent Variable | Dependent Variable (Y-Preferences of social housing) | | | | |
|--|--|------------|---------------------------|-------|-------|
| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. Error | Beta | | |
| (Constant) | -3.256E-017 | 0.067 | | 0.000 | 1.000 |
| X ₅ – Subjective norm | 0.332 | 0.067 | 0.332 | 4.946 | 0.000 |
| R = 0.332; R ² = 0.110; Adjusted R ² = 0.105; F = 24.465; Sig. = 0.000 | | | | | |

The result of single regression presented in the above table indicates that public Subjective norm is correlated to Preferences of social housing because of the significant level of p (sig. = .000). The correlation coefficient R is 0.332 showing a quite weak relationship between Subjective norm and the Preferences of social housing. The value of R² = 0.110 also shows the prediction of the variance in trust in the Preferences of customer in social housing by Subjective norm. 11.0% of the variance in trust in the Preferences of social housing can be explained by public Subjective norm. The value of F = 24.465 and its significance value of 0.000 mean that Subjective norm can explain well the variation in Preferences of social housing. In addition, that the t value is 4.946, higher than 2, with the significant level at 0.000 means that this independent variable is significantly contributing to the equation for predicting Preferences of social housing.

4.5.2 Multiple regression

Table 29: Multiple regression

| Independent Variable | Dependent Variable (Y- Preferences of social housing) |
|----------------------|--|
|----------------------|--|

| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|--|-----------------------------|------------|---------------------------|-------|-------|
| | B | Std. Error | Beta | | |
| (Constant) | -1.071E-16 | 0.058 | | 0.000 | 1.000 |
| X ₁ – Financial | 0.378 | 0.068 | 0.378 | 5.537 | 0.000 |
| X ₂ – Location | 0.165 | 0.075 | 0.165 | 2.207 | 0.028 |
| X ₃ – Living space | 0.015 | 0.066 | 0.015 | 0.234 | 0.816 |
| X ₄ – Environment | 0.060 | 0.074 | 0.060 | 0.809 | 0.420 |
| X ₅ – Subjective norm | 0.145 | 0.066 | 0.145 | 2.205 | 0.029 |
| R = 0.584; R ² = 0.341; Adjusted R ² = 0.324; F = 20.114; Sig. = 0.000 | | | | | |

The result of multiple regression is shown in Table 29. The quite high value of multiple correlation coefficient ($R = 0.584$) indicates a quite strong relationship between the observed and predicted value of dependent variable (Preferences of social housing). $R^2 = 0.341$ means that 34.1% of the variance in Preferences of customer in social housing can be predicted from five above factors (Financial, Location, Living space, Environment and Subjective norm). The value of F is 20.114 and significant at $p = 0.00$ (less than 0.05) showing that the combination of five independent factors significantly predicted Preferences of customer in social housing. However, with the significant level at $p=0.816$ and $p=0.420$, exceeded 0.05, it is impossible to conclude that Living space and Environment, have positive association with Preferences of social housing.

CHAPTER 5 –RECOMMENDATION AND CONCLUSION

5.1. Research Overview

The research defined the key factors on which government, the real estate agents, companies or investors should focus when they expected to know on which regarding areas with customers' social housing purchase decision making. Based on previous studies, the main variables were selected and divided into groups and a framework model was created to express the relationship between five independent variables included in the "Financial", "Location", "Living space", "Environment", "subjective criteria", and a dependent variable "Preferences".

The study was started with the use of the pilot to adjust the test questionnaire and clear meaning of the question amended, continue to analyze data on the reliability using Cronbach Alpha analysis and value by using exploratory factor analysis, and ends with the model and test hypotheses using the multiple regression; Moreover, the effect of demographics on the dependent variable is considered good.

5.2. Research Findings

The multiple regression of the study shows that "Financial", "Location" and "Subjective Norm" make a positive impact on "Preferences of social housing". "Living space" and "Environment" have not positive association with Preferences of social housing. These findings showed that "Living space" and "Environment" was not interested when people purchase social housing, which can be explained by the Vietnam Housing Law provisions communal housing area assembly is not more than 70m² and housing demand is more important than the environment. "Financial" factors have the strongest impact on the purchase of social housing because it is directly related to the income of civil servants. The monthly payments to own an apartment belonging to the social housing project is somewhat difficult considering the financial capacity of low-income people. That is the main reason that low-income people do not have apartment.

5.3. Limitation and further research

As for the adoption of sampling, the researcher just focused on civil servants who work at Department of Natural Resources & Environment and Department of Transport. As the research adopted the convenience sampling in carrying out this survey, this meant that all the respondents were chosen at the convenient of researcher. It is advisable for the further researchers in adopting the method of stratified sampling in collecting obtain a more accurate result within these areas. In this study, the researchers mentioned only form of lease-purchase social housing.

This study focuses on the object is the civil servants wishing to buy social housing. Further research should emphasize on the factors considered by different group of people. To obtain a more accurate data, the size of sample should be large enough (for example 500 respondents) to obtain accurate findings. Hence, further researcher should increase their number of sample used. According to the results of data analysis, the biggest factor to affect preference of social housing leasing is financial factor, while living space and environment factors are not affect preference of social housing.

5.4. Recommendation and conclusion

In conditions of Vietnam in general and Ho Chi Minh City in particular, more difficult, is to get the policies to encourage the construction and development of appropriate social housing for those who have difficulty in housing stable life, assured work is a matter of necessity and urgency. This study concluded the problems related to housing for low-income people as follows: First, the housing market for low-income people have great potential for development. Housing for low-income people mean welfare, greatly contributed to prosperity and civilization of the country. Second, the demand for housing for low-income people expressed many times higher than supply. State policies outlined remarkable effective, but not explicit. Third, bank credit indispensable role in solving the housing problem for low-income people. Bank currently engaged in providing credit support housing for low-income people but also hesitate.

In recent years, Ho Chi Minh City has a lot of efforts to solve the problem of social housing currently on the city, Ho Chi Minh City People's Committee has issued several decisions and policies set made to assist low-income people buy houses settle. The efforts that the city

would be positive signs in the gradual establishment of the social housing fund in the city - to solve the problem of housing for those struggling on the city. Although there are still many difficulties in the construction process, such as lack of capital, without the participation of business enterprises in the locality of the city... but to try to create the most favorable conditions and have mechanisms and policies to attract investment in a reasonable, Ho Chi Minh City will take steps to solve the problems and overcome the current difficulties to gradually achieve the objective of country to 2020, the average area 15m² per capita reached the floor for urban housing and reach the floor of 20 m² per capita in 2030.

This study is useful for the government and housing developers to consider the current buying preferences of social housing in the property market. Government should consider adjusting the social housing policy to conform with the financial situation of the people so that people can enjoy for access to forms this housing. To increase the supply and development of social housing projects better suited to the needs of citizens, governments need early planning for social housing development. Also, the implementation of investments in a variety of forms of social houses for sale and for rent social housing to fit more with the affordability of the people.

Establish incentives, supported by the Government, the investment mechanism social housing from social investment. The successful experience of other countries in the world have shown that under the market mechanism, the social subjects such as housing cooperatives... still can promote a positive effect in resolving the housing difficulties for low-income people. When Vietnam to promote the management and construction of social housing, in addition to improving the efficiency and quality of service to be very effective by market mechanisms. Through incentives such as premises, tax exemptions... should socialize investment capital to build social housing, reducing pressure to invest local governments and the central government. This is considered a breakthrough in terms of limited financial possibilities of the State for social housing. The rental housing projects built by private capital should be entitled to the preferential regime (financial support of the central government, providing premises, tax exemptions and credit policy to support) as projects invested by the government. May consider the establishment of cooperative housing construction in the local conditions.

With the situation of Vietnam, the demand for social housing of families with the ability to pay at different levels differ, so the Government will need to make different choices as purchase or lease , leasing ... to provide housing appropriate for each audience. In the immediate future, for the form of buying social housing, can be done at the same mode of property ownership. Depending on your financial situation, families can increase co-ownership right to social housing which is guaranteed to be income tax and national capital investments are not lost. For rent cases, the basis for calculating market price, and split-level support for housing, income security and housing reuse and management of capital repair of social investment , making the construction and operation of social housing for rent long term sustainability. Also perfect to strengthen the rental housing market and direction for people to buy housing gradually, step by step through the rent to be able to buy houses adapt to the conditions of the people. This is also a way to solve the basic housing needs of the people.

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APPENDICES

Appendix A: Key independent variables

| <u>Questionnaire Item</u> | <u>Literature viewed</u> |
|-----------------------------------|---|
| Financial factor | |
| Interest rate | Adair et al.(1996) and Daly et al. (2003) |
| Maximum monthly payment | Adair et al.(1996) and Daly et al. (2003) |
| Value of House | Adair et al.(1996) and Daly et al. (2003) |
| Length of time payment | Adair et al.(1996) and Daly et al. (2003) |
| Location factor | |
| Width of adjacent | Opoku & Abdul-Muhmin (2010) |
| Distance to central business | Adair et al. (1996) |
| Distance to school | Adair et al. (1996) |
| Distance to work | Adair et al. (1996) |
| Living space factor | |
| Quantity of bathrooms | Opoku & Abdul-Muhmin (2010) |
| Quantity of bedrooms | Opoku & Abdul-Muhmin (2010) |
| Size of living room | Opoku & Abdul-Muhmin (2010) |
| Storey of house | Opoku & Abdul-Muhmin (2010) |
| Environment factor | |
| Neighborhood | Whipple (1995) |
| Area attractiveness | Whipple (1995) |
| Noise from around districts | Whipple (1995) |
| General security | Whipple (1995) |
| Subjective norm | |
| Builder's reputation | Whipple (1995) |
| Perceived of risks | Whipple (1995) |
| Advices from family members | Whipple (1995) |
| Restriction of the social housing | Whipple (1995) |

Appendix B: Questionnaire in English version

Dear Sir / Madam,

I am conducting research on the factors influencing people's preference for social housing. The research results will help providers identify social housing needs of the people, especially civil servants with low incomes for social housing as well as improvement of social housing model offers help to solving housing problems for people in Ho Chi Minh City.

Social housing as defined in the Housing Law, which is defined as housing by the State or organization, and individuals of all economic sectors to invest in the construction. The lease-purchase social housing must prepay 20% of the value of the lease-purchase housing and pay the remaining amount over time, but not less than 10 years and not exceeding 15 years.

These statements relate to factors that affect people's preference for social housing. You please take some time to answer some of the following questions. All information from this questionnaire will be kept confidential and used for research purposes.

Thank you.

SECTION A

Do you agree with the following statements? Assess the level agreed under the scale from 1 (entirely disagree) to 7 (entirely agree):

| Entirely Disagree | Mostly Disagree | Somewhat Disagree | Neither agree nor disagree | Somewhat Agree | Mostly Agree | Entirely Agree |
|-------------------|-----------------|-------------------|----------------------------|----------------|--------------|----------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| No. | Statement | Level Agreed | | | | | | |
|-----|---|--------------|---|---|---|---|---|---|
| 1 | I purchase social housing because its prices is reasonable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | I purchase social housing because its size is acceptable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | I purchase social housing because its quality is acceptable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | I purchase social housing because it is convenient place | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | If I purchase a house, I will definitely choose social housing. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION B

You please consider carefully each element, then choose factor affecting the decision to purchase social housing according to a scale from 1 (Entirely Unimportant) to 7 (Entirely Important):

| Entirely Unimportant | Mostly Unimportant | Somewhat Unimportant | Neither Important nor Unimportant | Somewhat Important | Mostly Important | Entirely Important |
|----------------------|--------------------|----------------------|-----------------------------------|--------------------|------------------|--------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| No. | Element | Important Level | | | | | | |
|-----|-----------------------------------|-----------------|---|---|---|---|---|---|
| 1 | Interest rate | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | Maximum monthly payment | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | Value of house | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | Length of time payment | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | Width of adjacent | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6 | Distance to central business | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7 | Distance to school | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | Distance to work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | Quantity of bathrooms | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10 | Quantity of bedrooms | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11 | Size of living room | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12 | Storey of house | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13 | Neighborhood | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14 | Area attractiveness | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15 | Noise from around districts | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16 | General security | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17 | Builder's reputation | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18 | Perceived of risks | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19 | Advices from family members | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20 | Restriction of the social housing | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION C

1. Gender

☐ Male ☐ Female

2. Marital

☐ Single ☐ Married

3. Ages

☐ under 30 ☐ from 30 to 39 ☐ from 40 to 50 ☐ above 50

4. Education

☐ Highschool ☐ Colleague, University ☐ Postgraduate

5. Carreer

☐ Civil servant ☐ Civil servant as manager ☐ Other

6. Your monthly income

☐ under 3 million VND ☐ from 3 to 5 million VND
☐ from 5 to 7 million VND ☐ above 7 million VND

Appendix C: Questionnaire in Vietnamese version

Xin chào anh/chị,

Tôi đang tiến hành nghiên cứu về yếu tố ảnh hưởng sở thích của người dân đối với nhà ở xã hội. Các kết quả nghiên cứu sẽ giúp nhà cung cấp nhà ở xã hội xác định được nhu cầu của người dân, đặc biệt là những người có thu nhập thấp đối với nhà ở xã hội cũng như hoàn thiện mô hình nhà ở xã hội cung góp phần giải quyết vấn đề nhà ở cho người dân ở thành phố Hồ Chí Minh.

Nhà ở xã hội theo quy định tại Luật Nhà, được định nghĩa là nhà ở do Nhà nước hoặc tổ chức, cá nhân thuộc mọi thành phần kinh tế đầu tư xây dựng. Người thuê mua nhà ở xã hội phải trả trước 20% giá trị của nhà ở thuê mua và trả số tiền còn lại theo thời gian do những quy định của UBND tỉnh, nhưng không ít hơn 10 năm và không vượt quá 15 năm.

Đây là những phát biểu liên quan đến các yếu tố ảnh hưởng đến sở thích của người dân đối với nhà ở xã hội. Anh/chị vui lòng bỏ chút thời gian trả lời một số câu hỏi sau đây. Tất cả các thông tin từ bảng câu hỏi này sẽ được giữ bí mật và được sử dụng cho mục đích nghiên cứu.

Cảm ơn anh/chị.

Phần A

Anh/chị có đồng ý với các phát biểu sau đây không? Đánh giá mức độ đồng ý theo thang đo từ 1 (hoàn toàn không đồng ý) đến 7 (hoàn toàn đồng ý), trong đó:

| Hoàn toàn không đồng ý | Hầu như không đồng ý | Không đồng ý | Không có ý kiến | Đồng ý | Hầu như đồng ý | Hoàn toàn đồng ý |
|------------------------|----------------------|--------------|-----------------|--------|----------------|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| STT | Phát biểu | Mức độ đồng ý | | | | | | |
|-----|--|---------------|---|---|---|---|---|---|
| 1 | Tôi mua nhà ở xã hội vì giá nhà ở xã hội phù hợp với thu nhập | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | Tôi mua nhà ở xã hội vì diện tích phù hợp với nhu cầu sử dụng | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | Tôi mua nhà ở xã hội vì chất lượng nhà ở xã hội chấp nhận được | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | Tôi mua nhà ở xã hội vì địa điểm nhà ở xã hội thuận lợi | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | Nếu tôi mua nhà ở, tôi sẽ mua nhà ở xã hội | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Phần B

Anh/chị vui lòng xem xét cẩn thận từng yếu tố, sau đó lựa chọn yếu tố ảnh hưởng đến quyết định chọn mua nhà ở xã hội theo thang đo từ 1 (hoàn toàn không quan trọng) đến 7 (hoàn toàn quan trọng), trong đó:

| Hoàn toàn không quan trọng | Hầu như không quan trọng | Không quan trọng | Bình thường | Quan trọng | Hầu như quan trọng | Hoàn toàn quan trọng |
|----------------------------|--------------------------|------------------|-------------|------------|--------------------|----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| STT | Yếu tố | Mức độ quan trọng | | | | | | |
|-----|---|-------------------|---|---|---|---|---|---|
| 1 | Lãi suất vay mua nhà ở xã hội | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | Khả năng thanh toán tiền nhà hàng tháng | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | Giá trị của căn nhà. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | Khoảng thời gian thanh toán tiền mua nhà | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | Độ rộng của đường tới nhà ở xã hội | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6 | Vị trí gần trung tâm thương mại, chợ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7 | Vị trí gần trường học | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | Vị trí gần nơi làm việc | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | Số lượng phòng tắm. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10 | Số lượng phòng ngủ | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11 | Kích thước phòng khách | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12 | Tầng của ngôi nhà | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13 | Khu dân cư lân cận với nhà ở xã hội (phức tạp, ổn định) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14 | Khu vực sầm uất, năng động | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15 | Khu vực yên tĩnh không bị ảnh hưởng tiếng ồn đường phố | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16 | Khu vực đảm bảo tình hình an ninh trật tự | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17 | Danh tiếng chủ đầu tư xây nhà ở xã hội | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18 | Nhận thức rủi ro về nhà ở xã hội | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19 | Tư vấn của các thành viên trong gia đình. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20 | Hạn chế về điều khoản sử dụng nhà ở xã hội | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Phần C (Đánh dấu chọn vào ô)

1. Giới tính?

☐ Nam ☐ Nữ

2. Tình trạng hôn nhân

☐ Độc thân ☐ Đã kết hôn

3. Tuổi của anh/chị

☐ dưới 30 ☐ từ 30 đến 39 ☐ từ 40 đến 50 ☐ trên 50

4. Trình độ của anh/chị?

☐ Trung học phổ thông ☐ Cao đẳng, đại học ☐ Trên Đại học

5. Nghề nghiệp của anh/chị?

☐ Cán bộ, công chức, viên chức ☐ Cán bộ, công chức, viên chức quản lý

☐ Khác

6. Thu nhập hàng tháng của anh/chị?

☐ dưới 3 triệu đồng ☐ từ 3 đến 5 triệu đồng

☐ từ 5 đến 7 triệu đồng ☐ trên 7 triệu đồng